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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/024,431	12/18/2001	James P. O'Shea	04373-015001	3382

26161 7590 10/15/2003

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EXAMINER	
CYGAN, MICHAEL T	
ART UNIT	**PAPER NUMBER**
2855	

DATE MAILED: 10/15/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/024,431	O'SHEA, JAMES P.	
	Examiner	Art Unit	
	Michael Cygan	2855	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 September 2003* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☒ The proposed drawing correction filed on *24 April 2003* is: a)☒ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 28 August 2003 has been entered.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-3, 6, 7, 9, 10, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eckert (US 4,384,486). Eckert teaches a tank liquid level gauge for use with a tank [10] containing pressurized volatile liquefied gas (column 3, lines 24-32) comprising a closed float member [44], float magnet [46] coupled to upper portion of float member (Figure), elongated tape-like shaft [64] coaxially engaged with upper portion of float

member (Figure), impermeable and non-magnetic tube [34] between shaft and float, indicator magnet [66] positioned on shaft and responsive to movements of the float magnet, where the shaft indicates tank liquid level by axial positioning of the magnet [66]; the position of the magnet corresponds to the level of the liquid; see column 3, line 24 through column 4, line 47. The shaft which holds the magnet is substantially linear. A coupling [56,60] converts axial movement into rotational movement (column 4, lines 1-10). A cover includes a window, lens [78], through which the shaft level indications may be seen (column 4, lines 10-14 and 30-47). The float tube [44] extends far enough into the tank so as to float when the liquid has reached a relatively low level; see Figure. Eckert teaches the claimed invention except for the float member being bifurcated. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use a bifurcated float member, since it has been held that constructing a formerly integral structure in various elements involves only routine skill in the art. See Nerwin v. Erlichman, 168 USPQ 177, 179; also In re Dulberg, 289 F.2d 522, 523, 129 USPQ 348, 349 (CCPA 1961).

3. Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eckert (US 4,384,486) in view of Wood (US 5,472,012). Eckert teaches the claimed invention except for a shut-off device which indicates a predetermined level occurrence through actuation by the float member

of an inlet closure valve which increases flow resistance, thereby signaling the delivery pump to shut off flow. Note applicant's disclosure of the "signaling" process at page 6, lines 3-7. Wood teaches a shut-off device for a pressurized liquid storage tank which indicates a predetermined level occurrence through actuation by the float member of an inlet closure valve which increases flow resistance (i.e., thereby signaling the delivery pump to shut off flow); see abstract and column 7, line 65 through column 8, line 65. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use a shut-off device in which actuation by the float member of an inlet closure valve increases flow resistance (thereby signaling the delivery pump to shut off flow) as taught by Wood in the invention taught by Eckert to control filling of the tank with pressurized liquid, since Wood states that overfilling of a storage tank with pressurized fluids may result in spillage, tank damage, or injury to persons (column 1, lines 26-38) and describes numerous benefits of the shut-off valve (column 8, lines 47-65).

4. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Eckert (US 4,384,486) in view of White (US 5,124,686). Eckert teaches the claimed invention except for the use of an indicator colored green, yellow, and red which indicate adequate level, low level and nearly empty. White teaches the use of an indicator [72] colored green, yellow, and red

which indicate adequate and warning levels in a float-based liquid level sensor; see column 5, line 52 through column 6. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use a multicolored indicator as taught by White in the invention taught by Eckert to indicate tank level, since such a "standard" scheme provides an easy-to-understand indication of the status of the tank contents.

5. Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eckert (US 4,384,486) in view of White (US 5,124,686) as applied to claim 8, further in view of D'Antonio (US 5,589,639). Eckert teaches the claimed invention except for assigning a red color to a nearly empty state, a yellow to a low level state, and a green to a adequate functioning state, and the assignation of such states to available content times of <2, 2-6, or >6 hours. D'Antonio teaches a fire extinguisher level indication system in which assignment of red color to a nearly empty state, a yellow to a low level state, and a green to a adequate functioning state is made; see column 19, lines 36-60. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use a color assignation scheme as taught by D'Antonio in the invention taught by Eckert to indicate tank level, since D'Antonio teaches the use of such a

scheme in fire extinguishers for level warning purposes and such would be desired in the fire extinguisher level indicator of Eckert.

With respect to claim 12, the states of D'Antonio correspond to different volumes, which is an inherent representation of the time of future operational use of the extinguisher prior to depletion. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the claimed time ranges to so calibrate the indicator scale of the invention taught by Eckert, since, where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." In re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955). Note that the rationale to modify or combine the prior art does not have to be expressly stated in the prior art; the rationale may be expressly or impliedly contained in the prior art or it may be reasoned from knowledge generally available to one of ordinary skill in the art, established scientific principles, or legal precedent established by prior case law. In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); In re Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). See also In re Kotzab, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000) (setting forth test for implicit teachings); In re Eli Lilly & Co., 902 F.2d 943, 14 USPQ2d 1741 (Fed. Cir. 1990) (discussion of reliance on legal precedent).

6. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Eckert (US 4,384,486) in view of Duenas (US 6,336,362). Eckert teaches the claimed invention except for application of the liquefied gas level detection system to a tank containing propane. Duenas teaches the use of a float-based level detection system for liquid pressurized propane; see column 1, lines 19-67. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use propane for the volatile, pressurized liquid as taught by Duenas in the invention taught by Eckert, since Duenas teaches that propane requires frequent and accurate level measurement; see column 1, lines 19-30.

Response to Arguments

7. Applicant's arguments with respect to claims 1-14 have been considered but are moot in view of the new ground(s) of rejection.

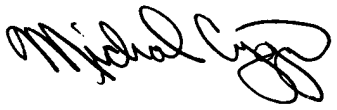
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Cygan whose telephone number is 703-305-0846. The examiner can normally be reached on 8:30-6 M-Th, alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz can be reached on 703-305-4816. The fax phone

number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.



Michael Cygan
Examiner
Art Unit 2855